

Claims

1. A method for calibrating at least one milk meter in a milking system (36;40) comprising at least one milking station (10a, 10b; 20; 30) having at least one milk meter (14a,14b; 21a,21b,21c,21d; 31;41a,41b,42a,42b) that measures at least one value of a parameter that corresponds to the milking performance of a milking animal, said milking station is accessible to a herd of milking animals, **characterised in** that said method comprises the steps of:

- determining an internal or external reference value (RV) which reflects the amount of milk received from a number of milking animals during a selected time period in a reference unit (19;32;42a,42b),
- retrieving all measured values during the selected time period for each milk meter (14a,14b;21a,21b,21c,21d; 31;41a,41b,42a,42b) that by itself contribute to the amount of milk received by said reference unit (19;32;42a,42b),
- comparing said reference value (RV) with the sum of all retrieved measured values and calculating a correction function ($C;C_{com}$) for at least one of said milk meters, and
- using said calculated correction function to adjust the measured value from said at least one milk meter.

2. The method according to claim 1, wherein said method is used to calibrate one or more milk meters, which has been determined to be in need of a calibration by comparing an expected value of the milking performance with the measured value.

3. The method according to claim 1 or 2, wherein said reference unit is selected to be a receiver (19) that collects the milk in the system after milking of each milking animal, and said step of determining the reference value is performed

by measuring the amount of the milk in the receiver (19), thus said reference value is an internal reference value.

4. The method according to claim 1 or 2, wherein said reference unit is selected to be an intermediate milk meter (42a, 42b) which is directly connected to at least one milk meter (41a, 41b), and said step of determining the reference value is performed by measuring a value of a milking performance parameter of said intermediate milk meter (42a, 42b), thus said reference value is an internal reference value, which may be compared to the values measured by each milk meter (41a, 41b).

5. The method according to any of claims 1-4, wherein said milking system is provided with an external unit (32) being provided with an external milk meter (33) to measure the amount of milk transferred from the milking system to said external unit (32), said step of determining the reference value (RV) is performed by measuring the amount of milk transferred from the receiver (19) to the external unit (32) using said external milk meter (33), thus said reference value is an external reference value.

6. The method according to claim 5, wherein the method further comprises the additional steps of:

- determining the amount of milk in the receiver (19) prior to transferring the milk to the external unit (32),
- comparing said amount of milk in the receiver with the external reference value, and
- calculating the correction function which is used when determining the amount of milk in the receiver (19).

7. The method according to claim 5 or 6, wherein said method further comprises the additional steps of re-calibrating the

milk meters (14a,14b;21a,21b,21c,21d;31;42a,42b) that by themselves contribute to the amount of milk received by the receiver (19) when the correction function has been calculated which is used when determining the amount of milk in the receiver (19).

8. The method according to any of claims 1-7, wherein the correction function is selected to be equal to 1 unless the reference value (RV) deviate more than a predetermined amount from the sum of all retrieved measured milking performance values.

9. The method according to claim 8, wherein said predetermined amount is selected to be 5%.

10. The method according to any of claims 1-9, wherein the milking system comprises a control device (15) connected to each milk meter, said internal or external reference value being accessible to said control unit (15), and said calculations of correction functions is performed in said control unit (15).